Response to Restriction

In response to the Restriction Requirement, Applicants elect for further prosecution the claims of Group III, namely Claims 18-19. This election is made without traverse.

Response to Election of Species

Applicants elect nucleic acids for the species of target analytes. Applicants elect nucleic acids for the species of bioactive agent. Claims 18 to 32 read on the elected species of target analytes. Claims 18-32 read on the elected species of bioactive agent.

Amendments

In addition, prior to examination, please amend the above-identified application as follows:

In the Specification

At page 1, prior to the first sentence, insert the following paragraph:

- -This application claims the benefit of priority application Serial No. 60/113,968, filed on December 28, 1998, and is a continuing application of Serial No. 09/256,943, filed February 24, 1999, both of which are hereby expressly incorporated by reference.- -.

In the Claims

Claims 1-17 are canceled.

18. A method of determining the presence of one or more target analytes in one or more samples comprising:

a) contacting said sample with a composition comprising:

i) a substrate with a surface comprising a plurality of assay locations, each assay location comprising discrete sites; and

ii) a population of microspheres comprising at least a first and a second subpopulation each comprising a bioactive agent;

wherein said microspheres are distributed on said surface such that said discrete

sites contain microspheres; and

b) determining the presence or absence of said target analyte.

19. A method of determining the presence of one or more target analytes in one or more samples comprising:

a) adding said sample to a first substrate comprising a plurality of assay locations, such that said sample is contained at a plurality of said assay locations;

b) contacting said sample with a second substrate comprising:

i) a surface comprising a plurality of array locations, each array location comprising discrete sites; and

ii) a population of microspheres comprising at least a first and a second subpopulation each comprising a bioactive agent;

wherein said microspheres are distributed on said surface such that said discrete sites contain microspheres; and

b) determining the presence or absence of said target analyte.

20. (New) A method according to claim 18 wherein each of said assay locations comprises a substantially similar set of bioactive agents.

21. (New) A method according to claim 18 wherein said substrate is a microtiter plate and each assay location is a microtiter well.

22. (New) A method according to claim 18 wherein each discrete site is a bead well.

23. (New) A method according to claim 18 wherein each of said subpopulations further comprise an optical signature capable of identifying said bioactive agent.

24. (New) A method according to claim 18 wherein each of said subpopulations further comprise an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated.

25. (New) A method according to claim 19 wherein said first substrate is a microtiter plate.

26. (New) A method according to claim 19 or 25 wherein said second substrate comprises a plurality of fiber optic bundles comprising a plurality of individual fibers, each bundle comprising an array location, and each individual fiber comprising a bead well.

27. (New) A method according to claim 19 wherein each of said subpopulations further comprise an optical signature capable of identifying said bioactive agent.

28. (New) A method according to claim 19 wherein each of said subpopulations further comprise an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated.

29. (New) A method according to claim 18 or 19 at least one of said target analytes is a nucleic acid.

30. (New) A method according to claim 1 or 2, wherein said microspheres are randomly distributed on said surface.

31. (New) A method according to claim 1 or 2, wherein at least a first subpopulation of microspheres comprises a bioactive agent comprising nucleic acids.

32. (New) A method according to claim 1 or 2, wherein at least a first subpopulation of microspheres comprises a bioactive agent comprising a protein.

REMARKS

Claims 18-32 are pending. Claims 1-17 are canceled without prejudice or disclaimer as drawn to a non-elected invention. Support for new claim 20-32 find support throughout the application as filed and in the claims as filed. Specifically, claim:

20 finds support in claim 2 as filed;

21 finds support in claim 3 as filed;

22 finds support in claim 4 as filed;

23 finds support in claim 5 as filed;

24 finds support in claim 6 as filed;